

REMARKS

Entry of the foregoing, reexamination and reconsideration of the subject application are respectfully requested in light of the amendments above and the comments which follow.

As correctly noted in the Office Action Summary, claims 1-24 were pending. By the present response, claim 1 has been amended. Thus, upon entry of the present response, claims 1-24 remain pending and await further consideration on the merits.

Support for the claim amendments can be found, for example, in at least the following portions of the specification: the original claims and the original figures, for example, Figure 10. However, the claimed invention is not limited to the preferred disclosed embodiments.

Entry of the foregoing is appropriate pursuant to 37 C.F.R. §1.116 for at least the following reasons. First, the amendments address the new grounds of rejection under 35 U.S.C. §103, thereby reducing the number of issues present upon appeal. Second, the amendments clearly overcome the grounds of rejection.

CLAIM REJECTIONS UNDER 35 U.S.C. §103

In the Official Action, at paragraph 2, claims 1-14 and 16-24 were rejected under 35 U.S.C. §103(a) as reciting subject matter which is allegedly obvious, and therefore allegedly unpatentable, over U.S. Patent No. 4,426,820, issued to Terbrack et al. (hereafter "*Terbrack et al.*"), in view of U.S. Patent No. 3,347,048 issued to Brown et al. (hereafter "*Brown et al.*"). Applicant respectfully requests reconsideration of these rejections.

The claimed invention is directed to a locking system for mechanical joining of floorboards having, *inter alia*, in a joined state, a space which extends horizontally from the inner vertical plane at least halfway to the outer vertical plane. This space is in the groove "between the inner vertical plane and the outer vertical plane and below the tongue" and "extends horizontally from the inner vertical plane and at least halfway to the outer vertical plane." See claim 1. Further, "in the joined state, the cooperating upper abutment surfaces are in contact with each other and are limited horizontally inwards from the joint edge and horizontally outwards to the joint edge by an inner vertical plane and an outer vertical plane, respectively." See claim 1.

The combination of *Terbrack et al.* and *Brown et al.* is improper as a basis for the obviousness rejection because the proposed modification renders one or the other cited references unsatisfactory for its intended purpose.

For example, *Terbrack et al.* discloses that the groove and tongue joint forms a connection with adjacent panels "preventing displacement." See, for example, column 1, lines 42-44 and lines 57-58. With respect to FIG. 10 relied upon by the Examiner in the Official Action, *Terbrack et al.* discloses a panel that has "a groove 26 in one panel and a key 27 in the other panel, which elements are dimensioned so as to fit into each other with tight fit." See column 4, lines 64-66.

In contrast, *Brown et al.* discloses revetment blocks that are "loosely joined and have recesses between adjacent blocks." See, for example, column 1, lines 12-13. *Brown et al.* further discloses that the blocks are "joined together by a loose tongue and groove

joint so designed that the blocks may tilt slightly with respect to each other." See column 1, lines 44-46.

Brown et al. distinguishes his revetment block noting that role the loose joint plays in the functioning of the revetment block. For example, *Brown et al.* discloses that "hydrostatic pressure is immediately relieved; first, because the loose joint permits upward lifting movement of the blocks." See column 3, lines 49-52. Thus, if the "tight fit" joint that "prevents displacement" disclosed in *Terbrack et al.* were to be combined in the revetment block of *Brown et al.*, then the revetment block would no longer relieve the hydrostatic pressure and would not function as intended.

Likewise, *Terbrack et al.* discloses that the panel is of a type that "a perfectly planar sports ground surface is obtained" (column 1, line 28) and that "relative displacement can not occur" (column 2, lines 14-15) between the assembled panels. Thus, if the joint of *Brown et al.* with the disclosed loose joining and slight tilt between adjacent blocks were to be combined in the panel of *Terbrack et al.*, then the panel would no longer provide a perfectly planar surface nor would relative displacement not occur.

The MPEP notes that a combination of references resulting in a prior art reference being unsatisfactory for its intended purpose is improper. See, MPEP §2143.01. Here, the combination proposed by the Examiner would result in the panel of *Terbrack et al.* from operating as designed and/or the revetment block of *Brown et al.* from functioning as designed. Thus, since the proposed modification or combination of the prior art would change the principle of operation of prior art being modified, then the teachings of the

reference are insufficient to render the claims *prima facie* obvious. See, MPEP §2143.01. Accordingly, applicant respectfully requests the withdrawal of this rejection.

The rejection based on a hypothetical combination of the disclosures contained in *Terbrack et al.* and *Brown et al.* is also improper because the Official Action has not established any motivation that would have directed one to modify the panel described in *Terbrack et al.* in the manner set forth in the Official Action. Indeed, detailed consideration of the disclosures in *Terbrack et al.* and *Brown et al.* reveals that no basis exists for modifying the panel disclosed in *Terbrack et al.* in light of the disclosure in *Brown et al.* in the manner contemplated in the Official Action.

The FIG. 10 illustration of a panel in *Terbrack et al.* relied upon in the Official Action discloses a groove 26 and a key 27, which are "dimensioned to fit into each other with a tight fit." Column 4, lines 65-66. The Official Action relies upon *Brown et al.* for its alleged disclosure of a space below the tongue that extends horizontally from the inner vertical plane to the outer vertical plane.

A person considering the disclosures contained in *Terbrack et al.* and *Brown et al.* would not have been directed to modify the construction of the panel disclosed in *Terbrack et al.* in light of the revetment block disclosed in *Brown et al.* as the panel and revetment block are joined fundamentally different. As noted above, the FIG. 10 panel shown in *Terbrack et al.* contains a groove 26 and a key 27 "dimensioned to fit into each other with a tight fit." Column 4, lines 65-66. Thus, the groove 26 and the key 27 are complementally shaped to fit one into the other. The tongue 22 and the groove 24 disclosed in *Brown et al.* are quite different in that they are loosely interlocked with a space 47 that permits tilting

relative to another block (column 2, lines 45-46) and permits both transverse and longitudinal movement of the joint (column 2, lines 56-59). Considering that the panel disclosed in *Terbrack et al.* is designed to be perfectly planar and to prevent displacement, there would be no need to include the noted features from the revetment block disclosed in *Brown et al.* as they would be unnecessary, and indeed contrary, to the intended operation of the panel described in *Terbrack et al.* One would not have been motivated to apply a joint having space 47 between the tongue 22 and the groove 24 as disclosed by *Brown et al.* to a panel joined by a groove 26 and a key 27 "dimensioned to fit into each other with a tight fit" as disclosed in *Terbrack et al.* Indeed, the loose fitting tongue and groove of *Brown et al.* acts inapposite to the tight fitting tongue and groove of *Terbrack et al.* in that the loose fitting tongue and groove would not produce a tight fit and would not produce a perfectly planar surface. For at least these reasons, the proposed modification is improper as no motivation exists for modifying the panel described in *Terbrack et al.* in light of the disclosure contained in *Brown et al.* Accordingly, withdrawal of the rejection is respectfully requested.

Furthermore, application of the noted features described in *Brown et al.* to the panel described in *Terbrack et al.* would not have resulted in a locking system for mechanically joining floorboards having the claimed combination and arrangement of features recited in claim 1. The Official Action on page 3 correctly notes that *Terbrack et al.* does not show a space below the tongue which extends horizontally between an inner vertical plane and an outer vertical plane. The Official Action thus relies upon *Brown et al.* for its alleged disclosure of a space below the tongue which extends horizontally from the inner vertical

plane to the outer vertical plane. The Official Action then observes that in combination with the disclosure in *Terbrack et al.*, *Brown et al.* may be used to modify *Terbrack et al.* to show a space below the tongue which extends horizontally from the inner vertical plane to the outer vertical plane.

However, what *Brown et al.* actually discloses is an inclined inner and outer end portions 40 and 46 and a space 47. As depicted, the locking tongue has a space between the upper side 30 and the wall 42. In contrast, as presently claimed the locking system recited in claim 1 has cooperating upper abutment surfaces that "are in contact with each other." Claim 1. Therefore, the combination of *Terbrack et al.* with the disclosure in *Brown et al.* does not result in cooperating upper abutment surfaces as presently claimed. For at least this further reason, the rejection should be withdrawn.

The remaining claims depend from claim 1 and are distinguishable over the cited references for at least the reasons set forth above. Thus, the withdrawal of the rejection of claims 2-14 and 16-24 is respectfully requested.

In the Official Action, at paragraph 3, claim 15 was rejected under 35 U.S.C. §103(a) as reciting subject matter which is allegedly obvious, and therefore allegedly unpatentable, over *Terbrack et al.* in view of *Brown et al.* and further in view of applicant's Figure 1c. Applicant respectfully requests reconsideration of these rejections.

Claim 15 depends from claim 1, and thus contains each and every limitation of that independent claim. Nothing in applicant's Figure 1c contributes to overcoming the above noted deficiencies in *Terbrack et al.* and *Brown et al.*, alone or in combination. Thus, claim 15 is distinguishable over the asserted combination of references for at least the same

reasons as presented with respect to the rejection of claim 1. Accordingly, the rejection of claim 15 is respectfully requested to be withdrawn.

CONCLUSION

From the foregoing, further and favorable action in the form of a Notice of Allowance is earnestly solicited. Should the Examiner feel that any issues remain, it is requested that the undersigned be contacted so that any such issues may be adequately addressed and prosecution of the instant application expedited.

Respectfully submitted,

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Date: November 13, 2002



Attachment to Amendment dated November 13, 2002

Marked-up Claim 1

1. (Twice Amended) A locking system for mechanical joining of floorboards, said locking system comprising a tongue-and-groove joint, the groove and tongue of which have cooperating upper abutment surfaces and cooperating lower abutment surfaces for vertical locking of two joint edges of two adjacent floorboards, said upper abutment surfaces extending in a first plane essentially parallel to a principal plane of the floorboards and said lower abutment surfaces extending in a second plane essentially parallel to the principal plane of the floorboards, and said locking system comprising, for horizontal mechanical joining of the joint edges perpendicular to the joint edges, a locking groove formed in an underside of a first one of the floorboards and extended in parallel therewith and spaced from the joint edge, and a portion projecting from a second one of the floorboards, said portion supporting, at a distance from the joint edge, a locking element cooperating with the locking groove, wherein said tongue is anglable into the groove, and wherein the locking element is insertable into the locking groove by mutual angular motion of the floorboards about upper portions of the joint edges,

wherein in a joined state, the cooperating upper abutment surfaces are in contact with each other and are limited horizontally inwards from the joint edge and horizontally outwards to the joint edge by an inner vertical plane and an outer vertical plane, respectively, the tongue-and-groove joint is so designed that there is in the groove between the inner vertical plane and the outer vertical plane and below the tongue, a space which extends horizontally from the inner vertical plane and at least halfway to the outer vertical

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Marked-up Claim 1

plane, an uppermost surface of the locking element is below the first plane, and at least a portion of the lower abutment surfaces are positioned outside the outer vertical plane, and

wherein in an angling state, the tongue-and-groove joint is further so designed that the floorboards, during a final phase of an inwards angling when the locking element is inserted into the locking groove, can take a position where there is space in the groove between the inner and the outer vertical plane and below the tongue.